



# **SURVEILLANCE FOR AVIAN INFLUENZA IN ARIZONA**

## **THE ROLE OF THE ARIZONA DEPARTMENT OF AGRICULTURE**

**Surveillance      Outreach**  
**In partnership with the USDA**

# AVIAN INFLUENZA VIRUSES



- Isolated from *eighteen* orders of birds
- Most commonly found in waterfowl
- AI viruses *vary* widely in pathogenicity from strain to strain
- Vast majority of AI viruses found in birds do not represent a public health concern

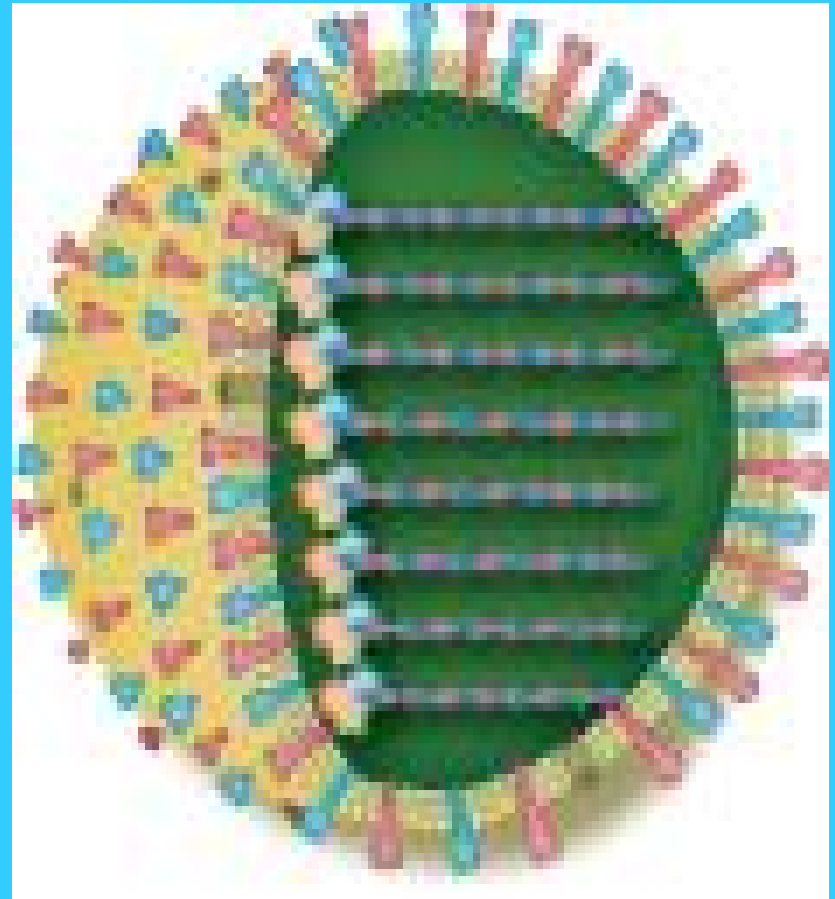
## Two Viral Types:

1. LPAI: low pathogenic form
2. HPAI: high pathogenic form



# AVIAN INFLUENZA VIRUSES

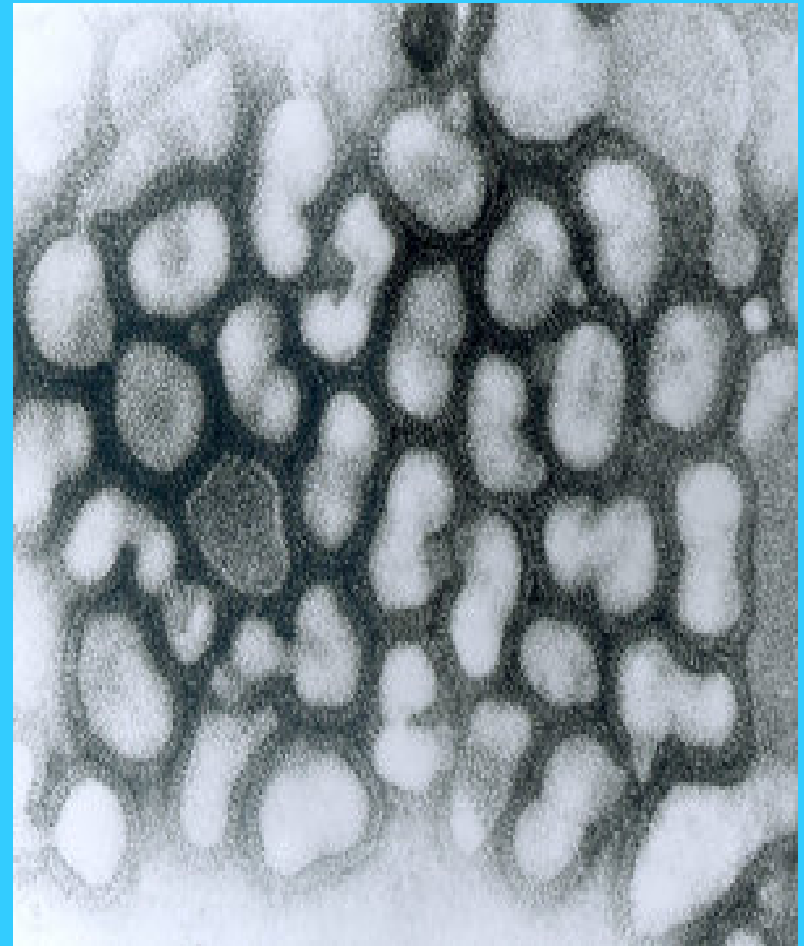
- **Each viral type contains:**
  - 1 of 16 H proteins
  - 1 of 9 N proteins
    - 144 possible combinations
- **Commonly mutate**
  - re-assort genes
  - genes encode for H and N proteins
  - re-combine into new genetic forms



# Low Pathogenic AVIAN INFLUENZA (LPAI)



- Most AI strains
- Known since ~ 1900
- Reservoirs:
  - *Free-ranging & domestic waterfowl*
- Domestic poultry:
  - Little or no visible disease
- Only H5 or H7 LPAI can mutate to HPAI form
  - Regulatory interest



# EFFECTS OF HIGHLY PATHOGENIC AVIAN INFLUENZA (HPAI)



- Severe-high mortality
- Spreads rapidly
- Devastating outbreaks in chickens, turkeys
- HPAI H5N1 (Asian-origin) pathogenic for some waterfowl
- *Not all H5N1 viruses are infectious for people nor are pathogenic to poultry*



# WHERE DO HPAI and LPAI OCCUR?



## U.S. HPAI types

- 1924 (H7)
- 1983 (H5N2)
- 2004 (H5N2)

## *HPAI Type H5N1 (Asian origin)*

- Southeast Asia
- China, Viet Nam
- Asia, Europe
- *not in U.S. (yet)*
- *human health hazard*
- *probably lethal to cats*

## LPAI

- Found occasionally in U.S. poultry
  - Respiratory disease
  - Reduced egg-laying
  - Quarantine/cull
- H5 or H7 LPAI
  - Regulatory concern
  - Can mutate to HPAI
- Not human health hazard

# **How might HPAI H5N1 (Asian-origin) arrive in U.S. ?**



- 1. Human infection and spread via airline passengers**
- 2. Illegal movement of infected poultry or poultry products**
- 3. Agro-terrorism**
- 4. Infected migratory birds**
  - **Cannot control movements**
  - **Prevent access to poultry**

# ADA SURVEILLANCE: Focus is on Non-Commercial Poultry



**Suspicious Disease in Poultry:  
Livestock & Poultry Hotline:  
888-742-5334**

## **1. Swabbing kits**

- **ADA Staff  
Veterinarians &  
Livestock Officers**
- **Samples sent to  
AZVDL in Tucson**

## **2. Necropsy**

- **Referred to AZVDL**





# **ADA OUTREACH: Focus is on Non-Commercial Poultry Owners**

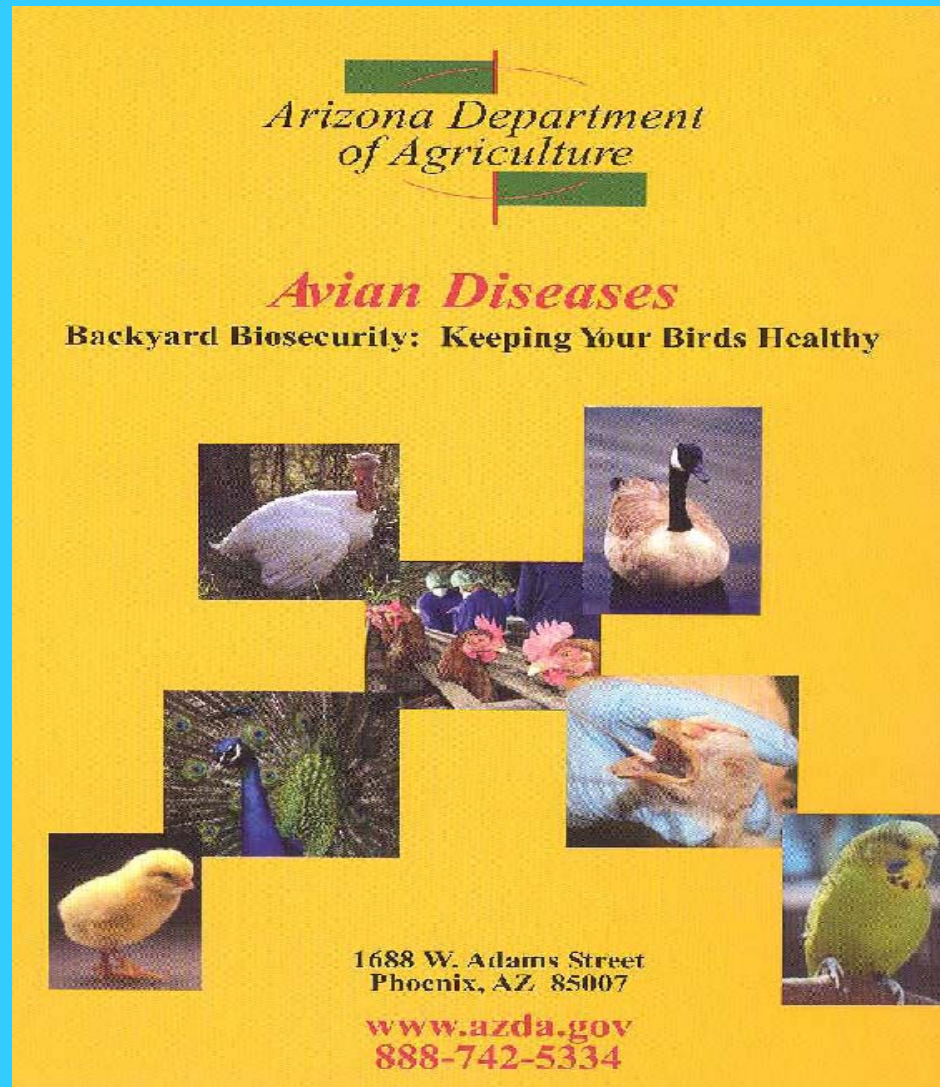


## **1. DISSEMINATION OF ADA/USDA OUTREACH PAMPHLETS VIA**

- **PRESENTATIONS TO POULTRY GROUPS**
- **FIELD VISITS BY LIVESTOCK OFFICERS**
- **COOPERATING FEED STORES**
- **DIRECT MAILINGS**
- **COOPERATIVE EXTENSION**
- **COOPERATING VETERINARIANS**

## **2. MASS MEDIA ADVERTISEMENTS**

# ADA OUTREACH PACKET CONTENTS



# BILINGUAL POSTCARD



## *Arizona Department of Agriculture*

Dear Poultry Owner,  
Bird diseases are constantly changing and pose a very real threat to your flock. The Arizona Department of Agriculture would like to keep you up to date on these diseases. Please fill out the following for the latest information!

Estimado dueño de aves,  
enfermedades de las aves de corral están cambiando constantemente y son una amenaza muy verdadera a su bandada. El Departamento de Agricultura de Arizona quisiera mantenerle avisado de estas enfermedades.

☐ **YES! Send me the latest information FREE!**  
**¡Lena esta forma por favor para la información más reciente!**

Name (Nombre): \_\_\_\_\_

Mailing Address (Dirección postal) : \_\_\_\_\_

E-mail address (Dirección de E-mail): \_\_\_\_\_

Types of poultry (Tipos de aves): \_\_\_\_\_



# BILINGUAL BIRD DISEASE SURVEILLANCE ACTIVITIES UPDATE



## Arizona Department of Agriculture

### Bird Disease Surveillance Activities Update: We Need You!



Dear Poultry Owner,

Avian Influenza and Exotic Newcastle have been receiving plenty of attention in the media recently and we want to make sure you are doing everything possible to protect your flock.

To ensure the safety of your flock, take a moment to review the attached ADA and USDA materials on Exotic Newcastle Disease (END) and Avian Influenza (AI) and as well as recommended flock biosecurity practices.



Given the current nationwide concern about avian influenza spreading throughout Asia and Eastern Europe and its potential to spread world-wide, the Arizona Department of Agriculture is expanding its poultry surveillance and preparedness activities.

Avian influenza not only threatens poultry health but, as you probably know, some variants of this disease found in Asia and Eastern Europe may now threaten human health.



It is extremely important that you report birds of all species showing any suspicious signs of disease, as both highly pathogenic Avian influenza (HPAI) and Exotic Newcastle Disease are highly contagious, devastating diseases among many types of poultry and may spread rapidly.

Call the **ADA Livestock and Poultry Disease Hotline (888-742-5334)** for assistance if you have birds showing suspicious signs of disease.

Subject to the availability of funding, the ADA will pay the costs of disease diagnosis for cooperating poultry owners who report sick birds showing signs suggestive of HPAI or END infection.

Thank you for your interest and cooperation.

Arizona Department of Agriculture  
Animal Services Division  
Office of the State Veterinarian



# USDA PAMPHLETS

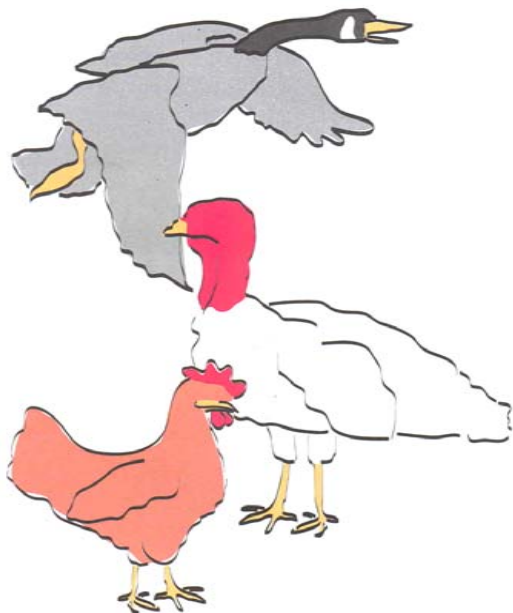


United States Department of Agriculture  
Animal and Plant Health Inspection Service

Program Aid No. 1836

## High-Pathogenicity Avian Influenza:

A Threat to U.S. Poultry



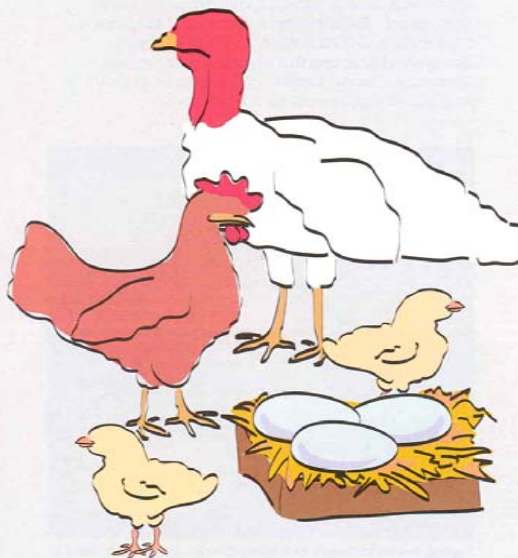
United States Department of Agriculture

Animal and Plant Health Inspection Service

Program Aid No. 1739

## Exotic Newcastle Disease

A Deadly Disease That Affects  
Poultry and Pet Birds



## BIOSECURITY FOR THE BIRDS

### Exotic Newcastle Disease

Exotic Newcastle disease (END) is a deadly poultry disease that can spread quickly, killing all your birds.

#### Know the Signs of END

- Sneezing, gasping for air, nasal discharge, coughing
- Greenish, watery diarrhea
- Depression, muscular tremors, drooping wings, twisting of head and neck, circling, paralysis
- Partial to complete drop in egg production
- Production of thin-shelled eggs
- Swelling of the tissues around the eyes and in the neck
- Sudden death and increased death loss in a flock

#### How END Spreads

END spreads through direct contact between healthy birds and the bodily discharges from sick birds. The disease affects almost all birds and poultry, even vaccinated poultry. END virus can be picked up on shoes, clothing, tools, vehicles and tires, and people who have come in contact with sick birds.

#### Practice Backyard Biosecurity

To prevent the possible spread of disease:

- Restrict traffic onto and off your property.
- Disinfect shoes, clothes, hands, egg trays or flats, crates, vehicles, and tires.
- Avoid visiting other poultry farms or bird owners.

#### Smart Practices When Buying Birds

Buy from a reputable dealer; request certification from suppliers that the birds were legally imported; maintain records of all sales and shipments of flocks; keep new birds separated from your flock for at least 30 days; keep young and old birds and birds of different species and from different sources apart.

#### Report Sick Birds at 1-866-536-7593.

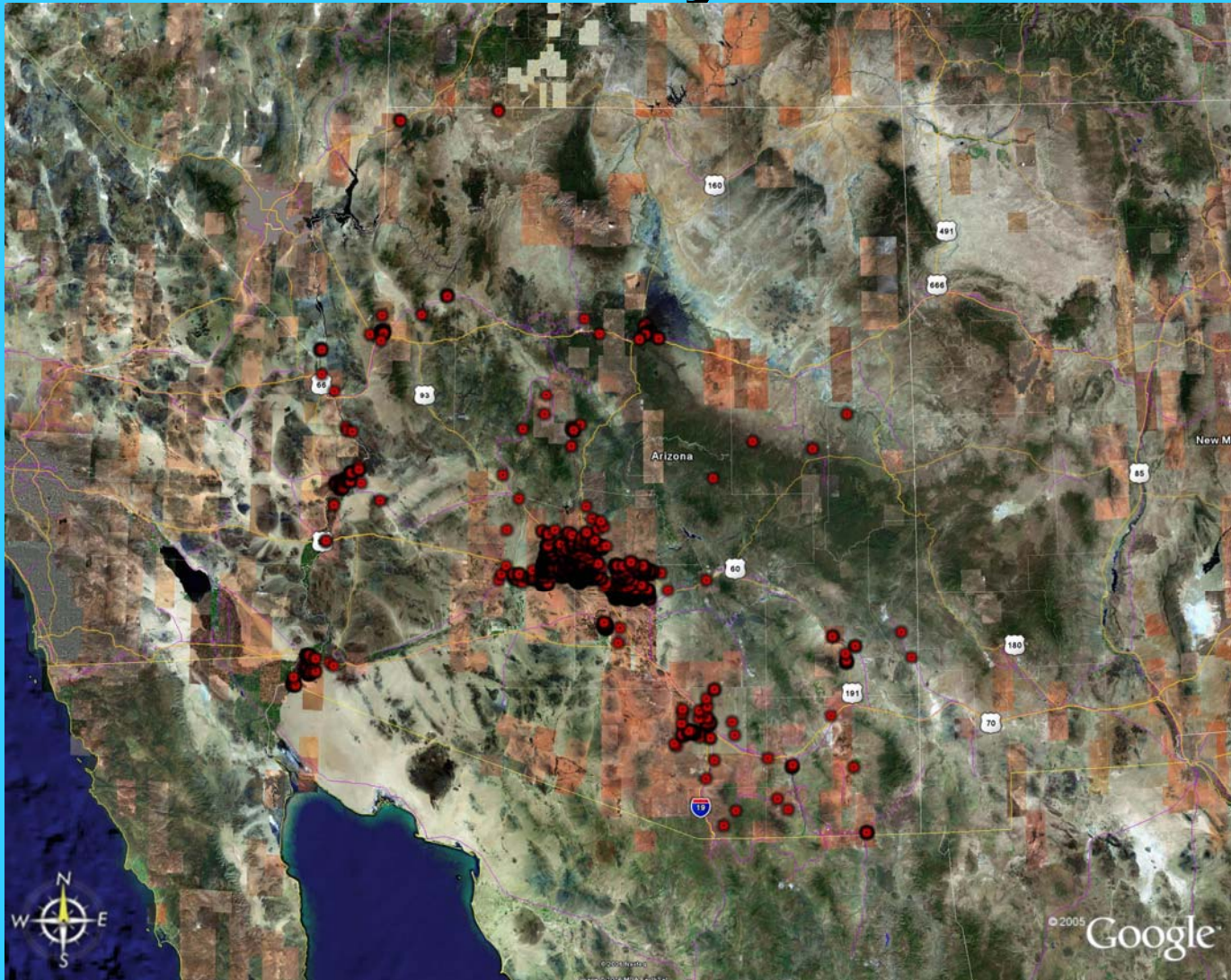
If your birds are sick or dying, call your local cooperative extension service, your local veterinarian, the State Veterinarian's office, or the U.S. Department of Agriculture's (USDA) Veterinary Services toll free at 1-866-536-7593 to find out why.

*You are the best protection your birds have.*

United States Department of Agriculture  
Animal and Plant Health Inspection Service  
Program Aid No. 1768 • Issued June 2004  
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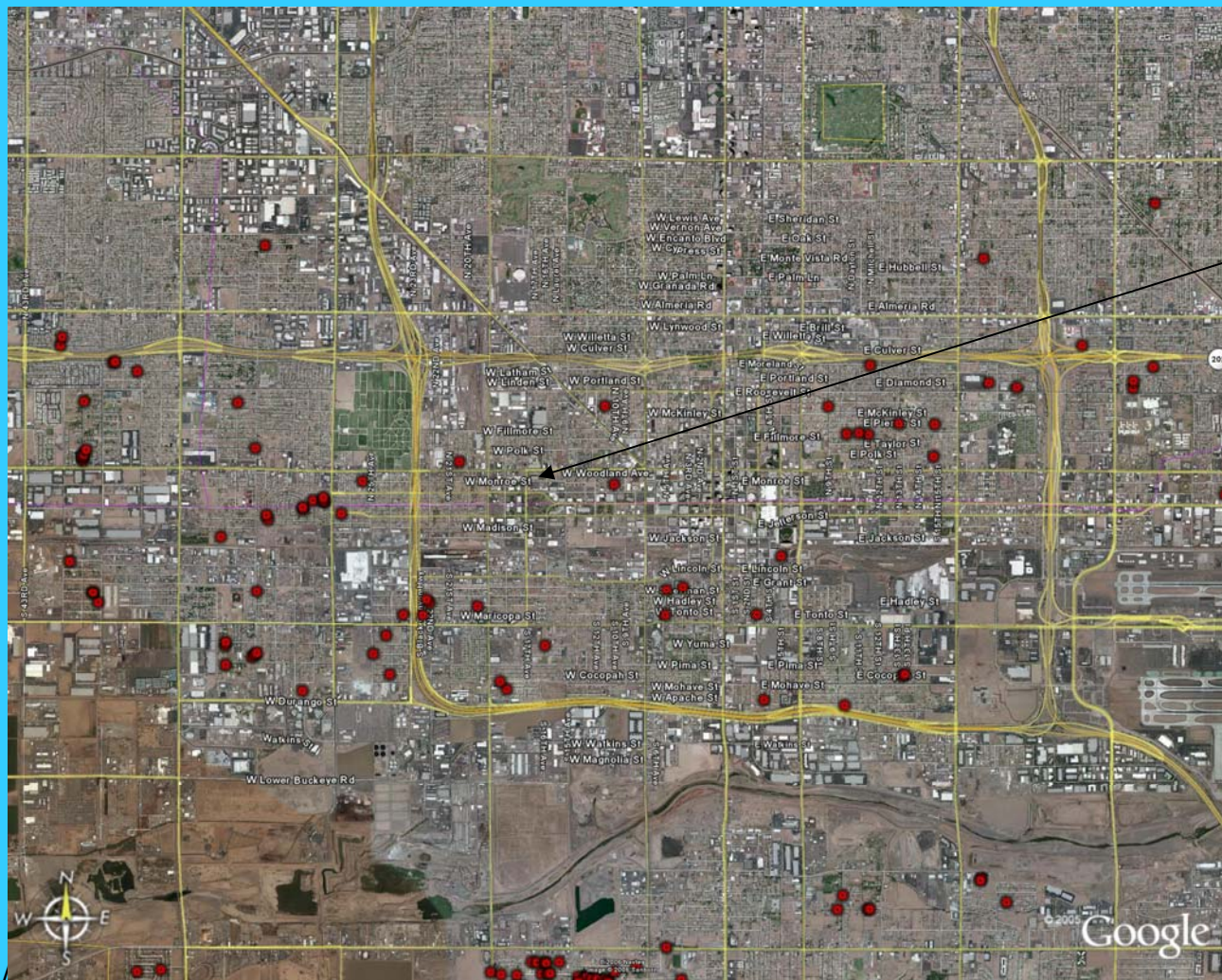


# Statewide Poultry Premises





# Downtown Phoenix Area Poultry Premises



AZDA Office



# **ADA/USDA EMPHASIS: BIOSECURITY**

## **Common-sense Disease Prevention**

### **1. Sanitation**

- **Personal**
- **Premises**

### **2. Exclusion**

- **Keep disease out**

**ADA OUTREACH PAMPHLET SIGN-UP SHEETS  
AT BACK OF ROOM**

**ADA LIVESTOCK AND POULTRY DISEASE  
HOTLINE 888-742-5334**

**##**